

[KV 803]

SEPTEMBER 2009

Sub. Code: 3803

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(Regulations 2008-2009)

(Candidates admitted from 2008-2009 onwards)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. a) Define and classify enzymes. Discuss the various factors affecting enzyme activity.
b) Explain Glycolysis with its energetics.
2. a) What are ketone bodies. Write in detail about Ketogenesis.
b) Discuss in detail about radioimmuno assay & enzyme linked immunosorbent assay.

II. Write notes on:

(6 x 5 = 30)

1. Oxidative phosphorylation.
2. Urea – cycle.
3. Replication.
4. Vanden – Berg reaction.
5. Lipoproteins.
6. Urine concentration tests.

[KW 803]

MARCH 2010

Sub. Code: 3803

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(Regulations 2008-2009)

(Candidates admitted from 2008-2009 onwards)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. a) Explain TCA cycle in detail with its energetics.
b) Discuss the β – oxidation of saturated fatty acids.
2. a) Write the biosynthesis of pyrimidine nucleotides.
b) Enumerate the various liver function test and discuss the tests for serum bilirubin and urine bilirubin.

II. Write notes on:

(6 x 5 = 30)

1. Transport across cell membranes.
2. Co enzymes.
3. GTT.
4. Various components of electron transport chain.
5. Protein biosynthesis.
6. Jaundice.

[KX 803]

SEPTEMBER 2010

Sub. Code: 3803

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(Regulations 2008-2009)

(Candidates admitted from 2008-2009 onwards)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. Describe the reaction, regulation and metabolic significance of citric acid cycle.
2. Discuss in detail about the metabolism of Cholesterol.

II. Write notes on:

(6 x 5 = 30)

1. Cyclic AMP and their biological significance.
2. Anaerobic dehydrogenases involved in biological oxidation.
3. Therapeutic and diagnostic applications of Coenzyme A.
4. Metabolic disorders of Amino acids.
5. DNA replication.
6. Kidney Function Tests.

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(Regulations 2008-2009)

(Candidates admitted from 2008-2009 onwards)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. a) Define enzymes.

Classify them and describe the factors affecting enzyme activity. **(14)**

b) What are coenzymes?

Describe the biochemical role of niacin and pyridoxine. **(6)**

2. a) Define lipids and Explain beta oxidation of fatty acids with its energetics. **(14)**

b) Atherosclerosis. **(6)**

II. Write notes on:

(6 x 5 = 30)

1. Explain in detail about ATP and its biological significance.

2. Write a brief note on metabolic disorders of carbohydrates.

3. Radio immuno assay.

4. Hyperbilirubinemia.

5. Lipoproteins - Types and functions.

6. HMP Shunt- A brief account.

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION**FIRST YEAR****PAPER III – MEDICINAL BIOCHEMISTRY****Q.P. Code: 383803****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :**

Pages (Max.)	Time (Max.)	Marks (Max.)
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- | | | | |
|---|----|---------|----|
| 1. a) Reactions of Oxidative Phosphorylation.
b) Components of respiratory chain.
c) Chemiosmotic theory. | 17 | 40 min. | 20 |
| 2. a) Reactions of TCA.
b) Energetics of TCA.
c) Reactions of β Oxidation. | 17 | 40 min. | 20 |

II. Write notes on :

- | | | | |
|--|---|---------|---|
| 1. Active transport. | 4 | 10 min. | 6 |
| 2. Structure of cholesterol and its functions. | 4 | 10 min. | 6 |
| 3. Determination of sodium in serum. | 4 | 10 min. | 6 |
| 4. Transamination. | 4 | 10 min. | 6 |
| 5. Porphyrrias. | 4 | 10 min. | 6 |
| 6. Purine catabolism. | 4 | 10 min. | 6 |
| 7. Maple syrup urine and alkatonuria. | 4 | 10 min. | 6 |
| 8. ELISA. | 4 | 10 min. | 6 |
| 9. Vandenburg. | 4 | 10 min. | 6 |
| 10. Creatinine clearance test. | 4 | 10 min. | 6 |

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION**FIRST YEAR****PAPER III – MEDICINAL BIOCHEMISTRY****Q.P. Code: 383803****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :****Pages Time Marks
(Max.) (Max.) (Max.)**

1. Write a detailed note on the Urea cycle with reactions.
Mention its major metabolic disorders. 17 40 min. 20
2. Explain the semi conservative replication of a double stranded DNA molecule. Add a note on its repair mechanism. 17 40 min. 20

II. Write notes on :

1. Explain the Van den Bergh reaction. 4 10 min. 6
2. Discuss the biological significance of cyclic – adenosine monophosphate (c-AMP). 4 10 min. 6
3. Write a note on Atherosclerosis. 4 10 min. 6
4. Explain the mechanism of Transamination. 4 10 min. 6
5. Explain the biochemical organisation of a cell. 4 10 min. 6
6. Enumerate the IUB classification of enzymes with example. 4 10 min. 6
7. Explain the Galactose tolerance test. 4 10 min. 6
8. What are the various types of Porphyrrias. 4 10 min. 6
9. Write a note on Urine analysis. 4 10 min. 6
10. Write a note on Urea clearance. 4 10 min. 6

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION**FIRST YEAR****PAPER III – MEDICINAL BIOCHEMISTRY*****Q.P. Code: 383803*****Time: Three Hours****Maximum: 100 marks****Answer ALL questions in the same order.****I. Elaborate on :**

Pages (Max.)	Time (Max.)	Marks (Max.)
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1. Explain the Hexose Monophosphate (HMP) Shunt.

Add a note on its significance.

17	40 min.	20
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2. Explain the various functions of liver.

Elaborate any two liver function tests.

17	40 min.	20
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II. Write notes on:

1. Write a note on Creatinine clearance test.

4	10 min.	6
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2. Discuss Radio Immuno Assay.

4	10 min.	6
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3. Discuss Adenosine triphosphate (ATP) as an energy rich compound.

4	10 min.	6
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4. Discuss the diagnostic applications of iso-enzymes.

4	10 min.	6
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5. Write a note on Diabetes mellitus.

4	10 min.	6
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6. Write a note on Hypercholesterolemia.

4	10 min.	6
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7. Explain the collection of blood samples in a clinical chemistry laboratory.

4	10 min.	6
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8. Enumerate the factors affecting enzyme activity.

4	10 min.	6
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9. Explain Oxidative phosphorylation.

4	10 min.	6
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10. What are the features of Genetic code.

4	10 min.	6
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DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 100 marks

Answer All questions

I. Elaborate on:

(2 x 20 = 40)

1. Write a detailed note on the Urea cycle with reactions.
Mention its major metabolic disorders.
2. Explain the semiconservative replication of a double stranded DNA molecule.
Add a note on its repair mechanism.

II. Write notes on:

(10 x 6 = 60)

1. Explain the Van den Bergh reaction.
2. Discuss the biological significance of cyclic – adenosine monophosphate (c-AMP).
3. Write a note on Atherosclerosis.
4. Explain the mechanism of Transamination.
5. Explain the biochemical organisation of a cell.
6. Enumerate the IUB classification of enzymes with example.
7. Explain the Galactose tolerance test.
8. What are the various types of Porphyrrias.
9. Write a note on Urine analysis.
10. Write a note on Urea clearance.

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(2 x 20 = 40)

1. a) Describe the reactions and significance of HMP shunt.
b) Explain about the β -oxidation of fatty acids.
2. Explain the semi conservative replication of a double stranded DNA molecule.
Add a note on its repair mechanism.

II. Write notes on:

(10 x 3 = 30)

1. What are zymogens? Give examples.
2. Write a brief note on chemiosmotic theory.
3. State the central dogma of molecular biology.
4. What are isoenzymes? Give its applications.
5. What is renal threshold? Give the renal threshold value for glucose.
6. Briefly explain the structure of plasma membrane.
7. Purine catabolism.
8. Define hyperbilirubinemia. Name the tests for bilirubin in urine.
9. Discuss about the key regulator enzymes in glycolysis.
10. Explain about the biological significance of cAMP.

[LF 803]

OCTOBER 2014

Sub. Code: 3803

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(2009-2010 Regulation)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(4 x 10 = 40)

1. Explain in detail about the reactions and energetic of beta oxidation of fatty acid.
2. Describe about the biosynthesis of porphyrin.
3. Discuss in detail about the various test to access kidney function Test.
4. Explain the factors influencing enzyme activity.

II. Write notes on:

(6 x 5 = 30)

1. Mechanism of enzyme action.
2. Glycogen storage diseases.
3. Biochemical functions of insulin.
4. Genetic code and its features.
5. Determination of sodium in serum.
6. What is dehydration? Write the different types of dehydration.

[LG 803]

APRIL 2015

Sub. Code: 3803

DOCTOR OF PHARMACY (PHARM. D) DEGREE EXAMINATION

(2009-2010 Regulation)

FIRST YEAR

PAPER III – MEDICINAL BIOCHEMISTRY

Q.P. Code: 383803

Time: Three Hours

Maximum: 70 marks

Answer All questions

I. Elaborate on:

(4 x 10 = 40)

1. Explain in detail and significance of Glycolysis.
2. Describe about the degradation and biosynthesis of Cholesterol.
3. Explain in detail about the components and reactions of ETC.
4. Describe in detail about the urea cycle and its disorder.

II. Write notes on:

(6 x 5 = 30)

1. What are inhibitors? Classify them with suitable example.
2. Uncouplers.
3. Endocrine disorders of Thyroid gland and adrenal glands.
4. Urea Clearance Test.
5. What is Mutation? Write the different types of Mutation.
6. What is blood buffer? Write the different types of blood buffer system.

[LH 803]

OCTOBER 2015

Sub. Code: 3803

PHARM. D DEGREE EXAMINATION

(2009-2010 Regulation)

FIRST YEAR

PAPER III – MEDICINAL BIO-CHEMISTRY

Q.P. Code : 383803

Time: Three Hours

Maximum: 70 marks

Answer ALL questions

I. Elaborate on :

(4 x 10 = 40)

1. Describe in detail about Radio Immuno Assay and ELISA.
2. Discuss the Clinical importance of Enzyme.
3. Discuss in detail about the various test to access Liver Function Test.
4. Describe in detail about the reaction of TCA cycle.

II. Write notes on :

(6 x 5 = 30)

1. Porphyrias.
2. Biological Significance of cyclic AMP.
3. Write any one metabolism of Amino Acid.
4. Write a note on Co-enzyme and its functions.
5. Glucogenolysis.
6. ATP-ADP Cycle.

[LI 803]

APRIL 2016

Sub. Code: 3803

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on :

(4 x 10 = 40)

1. Define Enzymes. Describe the various factors affecting Enzyme activity.
2. Write briefly about HMP shunt pathway.
3. What are Ketone bodies? Write in detail about the formation and utilization of Ketone bodies.
4. Write the biosynthesis of Purine nucleotides.

II. Write notes on :

(6 x 5 = 30)

1. Explain in detail about ATP and its biological significance.
2. Oxidative Phosphorylation.
3. Explain the Vanden Bergh reaction.
4. Lipoproteins.
5. What is Dehydration? Write the different types of Dehydration.
6. Write a short note on Clearance tests.

[LJ 803]

OCTOBER 2016

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Hexose Monophosphate Shunt and its significance.
2. The process of beta-oxidation.
3. The various functions of liver in the body.
4. Cholesterol, its functions and clinical significance with respect to lipid profile tests.

II. Write notes on:

(6 x 5 = 30)

1. Iso enzymes and their clinical significance.
2. Galactose tolerance test.
3. Jaundice.
4. Creatinine clearance test.
5. Explain any one immuno chemical technique.
6. Production of ATP

[LK 803]

MAY 2017

Sub. Code: 3803

PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain the semi-conservative replication of a double stranded DNA molecule.
2. Describe the various Renal function test and explain any two Renal function test.
3. Write in brief about the reactions and significance of Gluconeogenesis.
4. Write a note on NPN constituents and urinary tract calculi.

II. Write notes on:

(6 x 5 = 30)

1. Determination of HDL Cholesterol in serum.
2. β – oxidation of fatty acids.
3. Degradation of Purine.
4. Reversible enzyme inhibition.
5. Biological significance of cyclic – Adenosine Monophosphate (c-AMP).
6. Jaundice.

[LL 803]

OCTOBER 2017

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Electron transport chain with sites of ATP production.
2. Glycogen synthesis and breakdown.
3. Functions of Kidney and any two kidney function tests.
4. Biosynthesis of fatty acids with pathway and enzymes.

II. Write notes on:

(6 x 5 = 30)

1. Bilirubin.
2. Role of electrolytes in the body.
3. Diabetic keto acidosis.
4. Lipoproteins.
5. Transaminases and their clinical significance.
6. Genetic code.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LM 803]

MAY 2018

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. What are Isoenzymes and explain about their clinical significance.
2. Write about mutation and DNA repair mechanism.
3. Discuss in detail about the biosynthesis of Cholesterol.
4. Radio-Immuno Assay.

II. Write notes on:

(6 x 5 = 30)

1. Hyperbilirubinemia.
2. Oxidative phosphorylation.
3. Normal functions of Kidney.
4. Define and classify co-enzymes with examples.
5. Fatty liver.
6. HMP shunt.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LN 803]

AUGUST 2018

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Write briefly about TCA cycle and its significance.
2. Explain the steps involved in Electron transport chain and its mechanism.
3. Write in detail about the metabolism of Pyrimidine nucleotides.
4. Define and classify Enzymes.

II. Write notes on:

(6 x 5 = 30)

1. Atherosclerosis.
2. Give the reactions of Urea cycle.
3. Enzyme linked Immunosorbent assay.
4. Write the conversion of Cholesterol into bile acids.
5. Write note on Active transport with examples.
6. Give a short note about Diabetes mellitus.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LO 803]

MAY 2019

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Define and classify enzymes. Explain the factors affecting enzyme activity.
2. Describe in detail HMP Shunt.
3. Explain estimation of sodium and potassium.
4. Beta oxidation of fatty acids.

II. Write notes on:

(6 x 5 = 30)

1. Abnormal Constituents of Urine.
2. Jaundice.
3. Any one immunochemical test.
4. GTT.
5. Genetic code.
6. Metabolic disorder of amino acids.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[LP 803]

OCTOBER 2019

Sub. Code: 3803

**PHARM. D DEGREE EXAMINATION
(2009-2010 Regulation)
FIRST YEAR
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain the various transport process across Cell membranes.
2. Gluconeogenesis.
3. Co-enzymes involved in biological oxidation.
4. Determination of HDL and LDL in serum.

II. Write notes on:

(6 x 5 = 30)

1. Hormonal regulation of lipid metabolism.
2. Significance of uncoupling.
3. Write a note on Deamination.
4. Galactose tolerance test with its significance.
5. Protein turn over.
6. Write a brief note on Water and Electrolyte balance and imbalance.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0321]

MARCH 2021

Sub. Code: 3803

(OCTOBER 2020 EXAM SESSION)

PHARM. 'D' DEGREE EXAMINATION

FIRST YEAR (2009-2010 Regulation)

PAPER III – MEDICINAL BIO-CHEMISTRY

Q.P. Code : 383803

Time : Three hours

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Describe in detail about Radio Immuno Assay and ELISA.
2. Explain in detail and significance of Glycolysis.
3. Explain about fatty acid biosynthesis.
4. Describe in detail about the urea cycle and its disorder.

II. Write notes on:

(6 x 5 = 30)

1. What is Dehydration? Write the different types of Dehydration.
2. Oxidative Phosphorylation.
3. Creatinine clearance test.
4. Enumerate the factors affecting enzyme activity.
5. Explain the various functions of liver.
6. DNA repair mechanism.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0122]

**JANUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY
Q.P. Code : 383803**

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. The various functions of Liver in the body.
2. Describe in detail about the reaction of TCA cycle.
3. Discuss Co-enzymes in detail.
4. Describe the various Renal function test and explain any two Renal function tests.

II. Write notes on:

(6 x 5 = 30)

1. Role of electrolytes in the body.
2. Discuss Radio Immuno Assay.
3. Write a note on Isoenzyme and its functions.
4. Explain estimation of sodium and potassium.
5. Jaundice.
6. Structure of cholesterol and its functions.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0522]

**MAY 2022
(APRIL 2022 EXAM SESSION)**

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY
Q.P. Code : 383803**

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain catabolism of Amino acids.
2. Describe about the degradation and biosynthesis of Cholesterol.
3. Discuss in detail about the various test to access Liver Function Test.
4. Discuss Glycolysis.

II. Write notes on:

(6 x 5 = 30)

1. Explain in detail about ATP and its biological significance.
2. Urea – cycle.
3. Lipoproteins.
4. Write a note on Co-enzyme and its functions.
5. Write a short note on Clearance tests.
6. Enzyme linked Immunosorbent assay.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 1122]

**NOVEMBER 2022
(OCTOBER 2022 EXAM SESSION)**

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY
Q.P. Code : 383803**

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain in detail about Cyclic AMP and their Biological significance.
2. Describe about the biochemical role of coenzyme and deficiency diseases.
3. Discuss in detail about NPN constituents and Urinary tract calculi.
4. Express in detail about hormonal regulation in carbohydrate metabolism.

II. Write notes on:

(6 x 5 = 30)

1. Hypercholesterolemia.
2. Glycolysis.
3. Protein synthesis.
4. DNA repair mechanism.
5. Dye tests of excretory function.
6. Electrolyte distribution.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0423]

APRIL 2023

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code: 383803

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Describe the therapeutic and diagnostic applications of Isoenzymes.
2. Extend the biosynthesis of fatty acids and metabolism of cholesterol.
3. Explain in detail about the catabolism of Amino acids.
4. Enzyme linked immuno sorbent Assay.

II. Write notes on:

(6 x 5 = 30)

1. Energy rich compounds.
2. Glycogen Storage diseases.
3. Uncouplers.
4. Urine Concentration test.
5. Lipoproteins – Types and functions.
6. TCA Cycle.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 1023]

OCTOBER 2023

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code: 383803

Time : Three hours

Answer ALL Questions

Maximum : 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Write a detailed note on Glycogen storage diseases.
2. Describe Phenylketonuria and Alkaptonuria.
3. Write a detailed note on uncouplers.
4. Explain about purphoria.

II. Write notes on:

(6 x 5 = 30)

1. Classify the energy rich compounds.
2. Write a note on Hyper Cholesterolemia.
3. Hormonal regulation of Carbohydrate metabolism.
4. Nitrogen Balance.
5. Structure of Purine and Pyrimidine bases present in Nucleotides.
6. What is Lipid Profile? Give its significance and the write a note on Lipid Profile Tests.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMMD 0424]

APRIL 2024

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code: 383803

Time: Three hours

Answer ALL Questions

Maximum: 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Elaborate on HMP Shunt with the significance.
2. Describe in detail Electron transport chain with its mechanism in energy capture.
3. Discuss about DNA Replication and its repair mechanism.
4. Explain in detail factors affecting enzyme activity.

II. Write notes on:

(6 x 5 = 30)

1. Cell and its Biochemical organization.
2. Glucose Tolerance Test.
3. Protein Turnover and Nitrogen Balance.
4. Jaundice.
5. Dye test for Liver Excretory Function.
6. Ketone bodies.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 1024]

OCTOBER 2024

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code: 383803

Time: Three hours

Answer ALL Questions

Maximum: 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Define Enzymes. Explain the Nomenclature and IUB classification of Enzymes.
2. Explain in detail the transport process across the cell membranes.
3. Discuss the principle and procedure in determination of sodium and calcium in body fluids.
4. Explain the Beta oxidation of fatty acids with significance.

II. Write notes on:

(6 x 5 = 30)

1. Fatty Liver.
2. Decarboxylation of Amino acids.
3. Genetic Code.
4. Urine Analysis.
5. Diabetes Mellitus.
6. Radioimmuno Assay.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 0425]

APRIL 2025

Sub. Code: 3803

**PHARM. 'D' DEGREE EXAMINATION
FIRST YEAR (2009-2010 Regulation)
PAPER III – MEDICINAL BIO-CHEMISTRY**

Q.P. Code: 383803

Time: Three hours

Answer ALL Questions

Maximum: 70 Marks

I. Elaborate on:

(4 x 10 = 40)

1. Explain in detail and significance of gluconeogenesis.
2. Describe in detail about ATP, Cyclic AMP and their biological significance.
3. Extend the various procedure involve to access Liver Function Test with standard limits.
4. Write a note on Atherosclerosis.

II. Write notes on:

(6 x 5 = 30)

1. Write a brief note on Electrolyte balance and imbalance.
2. Outline the Production of bile pigments.
3. Discuss Maple syrup urine disorder.
4. Write a brief note on chemiosmotic theory.
5. What is blood buffer? List the different types of blood buffer system.
6. Write a short note on Clearance tests.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[PHARMD 1025]

OCTOBER 2025

Sub. Code: 3803

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I. Elaborate on:

(4 x 10 = 40)

1. Enumerate the biosynthesis of purine and pyrimidine nucleotides.
2. Explain the composition and roll of clinical chemistry laboratory.
3. Discuss the determination of HDL and LDL in serum.
4. Express in detail about urinary tract calculi.

II. Write notes on:

(6 x 5 = 30)

1. Explain the Van den Bergh reaction.
2. Write the principle involved in Dye tests of excretory function.
3. Outline hyperbilirubinemia.
4. Role of electrolytes in the body.
5. Reactions of Oxidative Phosphorylation.
6. Explain the abnormalities of serum protein.
